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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,092	12/27/2001	Yasutaka Ito	213163US2PCT	3826

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

PAIK, SANG YEOP

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 09/926,092	Applicant(s) ITO ET AL.	
	Examiner Sang Y Paik	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 10 and 13-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10 and 13-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/15/04, 9/27/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 2, 3, 4, 5, 10 and 13 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 12, 14, 15, 16, 18 and 19 of copending Application No. 10/618,651. Although the conflicting claims are not identical, they are not patentably distinct from each other because the provisional application '651 includes all the recited elements of this pending application '092 including the sintered ceramic plate, the heating element having at least two circuits, the bottomed hole for the sheath type-thermocouple pressed thereto by an elastic body or screw, and the claimed distance between the bottomed hole to the heating surface. The more specific invention in essence anticipates the broader invention of this application '092.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 1, 2, 3, 14, 15 and 10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims of copending

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Application No. 10/618,665 in view of Ushikoshi et al (US 5,306,895). The copending application '665 claims recite all the elements of this pending application '092 including the ceramic plate with a heating element formed on the bottom surface of the ceramic plate, a bottomed hole formed relatively closer to the heating surface than the heating element, a sheath type thermocouple pressed by the fixing or pressing device such as an elastic body, screw or a rod body, a control unit connected to a control unit, and the hole distance being 0.1 mm to one half of the thickness of the ceramic plate. However, the copending application '665 does not claim that the ceramic plate is a sintered ceramic made of nitride or carbide.

Ushikoshi shows that it is well known in the art to make a sintered ceramic plate made of nitride, and the heating element made of tungsten. In view of Ushikoshi, it would have been obvious to one of ordinary skill in the art to adapt the copending application claims with the ceramic made of nitride and the heating element made of tungsten to improve the thermal conductivity of the ceramic plate that can withstand a high temperature produced by the tungsten heating element.

This is a provisional obviousness-type double patenting rejection.

Claim Objections

4. Claim 10 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 10 recites a screw which was already recited in claim 1.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5, 10 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ushikoshi et al (US 5,306,895) or Arena et al (US 5,635,093) in view of Tymkewicz (US 4,259,123) or Huebscher (US 3,751,305).

Ushikoshi shows a ceramic heater including the structure claimed including a sintered ceramic plate with a bottom hole where the bottom hole is formed relatively nearer to the heating surface than the heating element which is made of tungsten and a temperature sensor such as a sheathed thermocouple disposed in the bottom hole (see Fig 32). Arena also shows a heater including a ceramic substrate with a heating element embedded therein with a bottom hole formed relatively nearer to the heating surface than the heating element for providing a temperature sensor such as a thermocouple therein (see Fig 2). However, neither Ushikoshi nor Arena shows the temperature sensor pressed with the pressing device such as a screw or a rod body to press the thermocouple on the bottom portion of the hole that is formed relatively nearer to the heating surface.

Tymkewicz and Huebscher also show a temperature-measuring device such as a sheathed thermocouple having a fixing device including a spring to continuously press the thermocouple via a rod member against a bottom portion of a hole. Tymkewicz and Huebscher further show a screw member that is screwed into the hole and to support the thermocouple.

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In view of Tymkewicz or Huebscher, it would have been obvious to one of ordinary skill in the art to adapt Ushikoshi or Arena with the fixing device including a screw member along with a rod body to support the thermocouple and to enable the thermocouple to come in close contact with the temperature measuring surface so that a more accurate temperature measurement can be made.

With respect to claim 4, Arena et al further shows the heating element being divided into a plurality of circuits.

With respect to claim 13, it would have been obvious to one of ordinary skill in the art to provide the bottom hole using a sandblast instrument or drilling since such would have conventional means to form a hole.

With respect to claim 15, Arena et al shows a control unit connected with the temperature sensor.

7. Claims 5 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ushikoshi or Arena in view of Tymkewicz or Huebscher as applied to claims 1-5, 10 and 13-15 above, and further in view of Yoshida et al (US 6,080,970), and Kubota et al (US 5,643,483) or Tsuyuki et al (US 5,068,517).

Ushikoshi or Arena in view of Tymkewicz or Huebscher discloses all the structure claimed except the heating element having a flat shape having the claimed ratio.

Yoshida shows a ceramic heater having a heating element having a flat shape. Kubota and Tsuyuki show ceramic heaters having the heating element having the claimed width and thickness within the claimed ratio.

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In view of Yoshida and Kubota or Tsuyuki , it would have been obvious to one of ordinary skill in the art to adapt Ushikoshi or Arena, as modified Tymkewicz or Huebscher, with a heating element having a flat shape with the claimed ratio to further improve the heating distribution as well as to maintain the desired heating capacity of the heating element.

8. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ushikoshi or Arena in view of Tymkewicz or Huebscher, or Yoshida and Kubota or Tsuyuki as applied to claims 1 and 16, respectively, and further in view of Matsushita et al (JP 09-45752).

Ushikoshi or Arena in view of Tymkewicz or Huebscher, or Yoshida and Kubota or Tsuyuki shows the ceramic heater claimed except the thermocouple having the claimed first and second portion wherein the second portion is pressed by the pressing device.

Matsushita shows a temperature measuring device disposed in a bottomed hole and it further shows the temperature measuring device having a first extending portion and a second extending portion along the heating surface.

In view of Matsushita, it would have been obvious to one of ordinary skill in the art to adapt Ushikoshi or Arena, as modified by Tymkewicz or Huebscher, and Yoshida and Kubota or Tsuyuki, with the temperature measuring device having the second portion which is further pressed by the pressing device to make a closer thermal contact with the heating surface.

Response to Arguments

9. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

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10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Y Paik whose telephone number is 571-272-4783. The examiner can normally be reached on M-F (9:00-4:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Paik

Sang Y Paik
Primary Examiner
Art Unit 3742

syp